

REMARKS

This correspondence is responsive to the Official Action mailed May 18, 2004 (Paper No. 10). Claims 1-15 were examined and remain pending. The Examiner rejected claims 1-15 under 35 USC § 103(a) as obvious over prior art figures 1-5 in applicant's specification. Applicant respectfully traverses the rejection.

The Examiner relies on applicant's Figure 5 as teaching a method for driving a segmented pi-cell modulator by applying an alternating carrier waveform. However, the Examiner acknowledges that applicant's Figure 5 "does not specifically teach the waveform is unipolar-carrier[sic], which does not change polarity within a time period that the pi-cell is energized." (Paper No. 10 at p. 2). Nevertheless, the Examiner goes on to assert that the use of a carrier waveform having a single, non-alternating polarity is well known in the art, and that the choice between an alternating polarity or unipolar carrier would be an obvious engineering design choice. Applicant respectfully disagrees and submits that the Examiner is mistaken.

First, the Examiner has provided no support for this bald assertion. As noted in MPEP §2144.03, "[o]fficial notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known." Simply because a unipolar waveform is capable of existing does not make it a known design choice for a specific application. Carrier waveforms typically have alternating polarity. Applicant respectfully requests that the Examiner make a evidentiary showing supporting the assertion that the use of a unipolar carrier waveform would be a routine design choice for driving a pi-cell.

Second, none of the prior art references of record support the Examiner's assertion. Applicant's disclosure teaches the various prior art driving waveforms that applicant is aware of for segmented pi-cell modulators, and none of these waveforms is unipolar. As stated by applicant on page 4 of its disclosure, "[s]ince the inception of pi-cells, they have generally been driven by an alternating polarity waveform of the sort shown in Figure 2." Although the notion of a unipolar waveform exists, and may well be used in other applications, there is no teaching or suggestion in applicant's disclosure, or in any of the references of record, of using a unipolar alternating carrier waveform for driving a segmented pi-cell as claimed. For this reason, each of the pending independent claims (1, 6 and 11) are patentable over the citation and should be allowed.

For example, claim 1 recites: "*applying an alternating, unipolar-carrier waveform to the pi-cell, wherein*

the carrier waveform does not change polarity within a time period that the pi-cell is energized.” There is no prior art of record that teaches or suggests applying an alternating unipolar carrier to a pi-cell. In similar manner, claim 6 includes two symmetrical elements:

applying a modulating waveform having a carrier signal of a first polarity to the pi-cell during a first time period, wherein the carrier signal does not change polarity during the first time period.

applying the waveform having a carrier signal of a second polarity opposite the first polarity to the pi-cell during a second time period, wherein the carrier signal does not change polarity during the second time period.

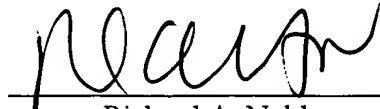
Claim 11 is directed to a device having a similar limitation: “*a drive circuit for applying an alternating, unipolar carrier waveform to the pi-cell, wherein the carrier waveform does not change polarity within a time period that the pi-cell is energized.*” Thus, applicant submits that each of these independent claims adequately distinguish from the prior art of record, and that the Examiner’s assertion regarding the availability of a unipolar carrier waveform is not well founded and should be withdrawn.

Each of the dependent claims are patentable since the independent claims are patentable.

For all the foregoing reasons, applicant submits that the claims are in condition for allowance and requests reconsideration to that end.

Respectfully submitted,

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